

**IMMORTALIZATION OF
HUMAN POST-MITOTIC CELLS**

5 **Abstract of the Disclosure**

10 The present invention provides an immortalized human
cardiomyocyte cell line and an immortalized human
vascular smooth muscle cell line. The present invention
15 further provides a method for preparing a human
immortalized cell line derived from a post-mitotic
primary cell culture which comprises: (a) providing a
cell culture of human primary post-mitotic cells, (b)
providing a human fibroblast cell line which: (i) has
20 been transfected with a replicable nucleic acid vector
which immortalizes the fibroblast cell line, (ii) has
been depleted of its mitochondrial DNA thereby rendering
the fibroblast cell line subject to growth selection due
incapacity to perform glycolysis; (c) co-culturing the
25 human fibroblast cell line of step (b) with the cell
culture of step (a) under appropriate conditions so that
cell fusion occurs; and (d) growing the fused cells from
step (c) in a selection medium which selects for cells
with mitochondrial DNA, (e) selecting cells from step (d)
which contain a nucleus which originated from the cells
of the primary culture, so as to prepare the human
immortalized cell line.

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